INTERNATIONAL BULLETIN
OF PLANT PROTECTION

1932 No. 7

DISCOVERIES AND CURRENT EVENTS

Madagascar: List of the Parasites and Diseases of Cultivated Plants (1).

COFFEE:	
Leaf disease	**Hemileia vastatrix* Berk. et Br.
Brown eye spot . . .	*Cercospora coffeicola* Berk. et Cooke
	**Gloeosporium coffeanum* Del.
Pink disease	*Corticium salmonicolor* Berk. et Br.
Rot	Mycelium of an unidentified fungus (possibly *Polyporus Coffeae* Wak.) living in association with *Lachnodius greeni* Vays.
Rot	Rhizomorphs resembling those of *Armillaria mellea*.
Lesion of the trunk .	Frost.
CACAO:	
	**Lasiodiplodia Theobromae* (Pat.) Griff. et Maubl.
Trunk disease . . .	?
CLOVE:	
Rot	?
PEACH:	
Leaf curl	*Taphrina deformans* (Berk.) Tul.
Rust	*Puccinia Pruni-spinosae* Pers.
APPLE:	
	**Gloeosporium fructigenum* Berk.
	Schizophyllum commune Fr.
VINE:	
Downy mildew . . .	*Plasmopara viticola* Berk. et Curt.
Powdery mildew . .	**Uncinula necator* (Schw.) Burr.
Rougeot	?
	Pestalozzia uvicola Speg.
	Cercospora viticola (Ces.) Sacc.

(1) Communication from the official correspondent of the Institute, Mr. G. BOURIQUET, Director of the Phytopathological Laboratory of Nanisana, Antananarivo.

MULBERRY:	
Powdery mildew . . .	**Ovulariopsis moricola* Del.
Leaf rust	**Sphaerella Mori* Tuck.
ACACIA (*A. decurrens, A. normalis* and *A. mollissima*):	
Wilt	?
ALBIZZIA (*A. Lebbeck*):	
Rust	*Sphaerophragmium Acaciae* Cke.
Rot	?
Gummosis	?
OAK:	
Mildew	*Microsphaera alphitoides* Griff. et Maubl.
MANIOC:	
	Cercospora Cassavae Ellis et Everhart
Rot	*Phellinus.*
Mosaic	Virus disease.
VANILLA:	
Anthracnose	**Calospora Vanillae* Massee *Glomerella Vanillae* (Zimm.) Petch
Brown stem spot . .	*Nectria Vanillae* Zimm.
Leprosy	*Cephaleuros Henningsii* Schmidle
Rot	*Fusarium*?
SUGAR CANE:	
Red rot.	**Colletotrichum falcatum* Went. *Coniothyrium Sacchari* (Mass.) Prill. et Del. *Leptosphaeria Sacchari* van Breda.
Rot	*Dictyophora multicolor* Berk. et Br.
RICE:	
	Rhamphicarpa longiflora Benth. ? **Eichornia crassipes* Solms
MAIZE:	
Rust	*Puccinia Maydis* Bér.
CASTOR OIL:	
Rust	*Melampsorella Ricini* (Biv.) Bern.

COCONUT:	
	**Pestalozzia Palmarum* Cooke
Sooty mould	?
GROUNDNUT:	
Rot	*Sclerotium Rolfsii* Sacc.
Leaf spot	**Cercospora personata* (B. et C.) Ell.
Rosette	Virus disease. Probably spread by *Aphis leguminosae* Theo. occurring in Madagascar.
TOBACCO:	
Mildew	**Erysiphe Cichoracearum* DC.
Mosaic	*Virus disease.
'Boka' (Leprosy) . .	Malformation of the leaves, cause unknown.
Root swellings . . .	Eelworms.
BASIL:	
Rust	Aecidium stage
ANDROPOGON MARTINI:	
Rust	Uredo stage
BEAN:	
Rust	*Uromyces appendiculatus* (Pers.) Lév. *Isariopsis griseola* Sacc.
CELERY:	
Leaf spot	*Septoria Apii* (Br. et Cav.) Rostr.
POTATO:	
Collar rot	Bacterial disease ?
TOMATO:	
Leaf mould	*Cladosporium fulvum* Cooke.
AUBERGINE:	
Rust	Aecidium stage on the leaves and fruits.
ROSE:	
Mildew	*Sphaerotheca pannosa* (Wallr.) Lév.
DAHLIA:	
	Entyloma Dahliae Syd.

The asterisk denotes the parasites which had been reported in Madagascar before the writer's arrival (October, 1929). The others have not to the writer's knowledge been reported previously.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Algeria. — By Decree of the Governor General dated 12 January 1932 the Decree of 24 August 1931 regulating importation into Algeria of plants belonging to the Aurantiaceae coming from Morocco is annulled and replaced by the following regulations:—

Importation of plants of the Aurantiaceae from Morocco shall be effected under the following conditions:—

Plants imported by sea must be accompanied by a copy of the commercial invoice or, if they have not come from a State controlled establishment, by a declaration from the consigner stating the nature, number, kind of rootstock and variety of graft.

The consignment must be accompanied by a certificate of official phytopathological inspection specifiying that the plants are not carrying *Lepidosaphes gloveri* or *Ceroplastes sinensis*.

Consignments of plants belonging to the Aurantiaceae imported from Morocco will further be subject to the provisions of Articles 3, 4, and 5 of the Decree of 14 February 1922 concerning the plant sanitary policy of Algeria.

Importation into Algeria by land is subject to the production of the same documents. The plants will in accordance with the importer's wish be sent by the custom service to Oran, Tlemcen, Perrégaux, Mascara or Sidi bel Abbès for inspection, on recommendation by the same Service, by the local officer of the Crop Protection Service or of the General Agricultural Service under the conditions of Articles 3, 4 and 5 of the Decree of 14 February 1922. They will travel under a custom house permit involving an undertaking to present the packets of plants sealed by the custom house on entry into Algeria to the officials of the Crop Protection Service or General Agricultural Service in order to guarantee their identity. The charge for sealing will be settled by the custom house at the time of sealing and will be borne by the importer.

Any importer failing to present packages to the officials responsible for sanitary inspection will be deprived in the future of the right to import plants into Algeria, and that without prejudice to the penalties provided in Article 471, § 15 of the penal code.

Any of the goods in question which shall circulate without the above-named documents, and, if they are plants imported by land, without being sealed, will be seized and impounded in accordance with the provisions of Article 11 of the Decree of 14 February 1922, without prejudice to the other penalties provided in this text. (*Journal Officiel de l'Algérie*, Alger, 29 janvier 1932, p. 65-66).

Germany. — The Ordinance of 2 February 1932 with a view to preventing introduction of diseases and pests of elms and Canadian poplar forbids until further notice importation of plants of *Ulmus* and *Populus canadensis*, also of cuttings, suckers, slips for grafting and other fresh parts of these trees The

transit of such plants and parts of plants is allowed under supervision of the custom offices.

Until further order importation of other deciduous trees, also of cuttings, suckers, slips for grafting and other fresh parts of such trees will be allowed only if consignments are accompanied by a certificate from the Phytopathological Service of the country of origin stating that they have been inspected and contain no plant or part of a plant of *Ulmus* or *P. canadensis*. (*Reichsgesetzblatt*, Teil I, Berlin, den 15. Februar 1932, Nr. 10, S. 63).

Germany (Bremen) (1). — By Ordinance of 23 February 1932 the destruction of thistles has been made obligatory. The work must be carried out each year before the flowering period and must extend to pasture, roads, railway embankments, ditches and all waste land, as well as to fields if it can be effected without damage to crops. The authorities will supervise the work. A first inspection will take place between 5 and 15 July, a second towards the end of August of each year.

Germany (Hamburg) (1). — By Notification of 25 February 1932 holders of apple orchards in the communes of Finkenwärder and Moorburg are obliged to treat the trees against the apple leaf sucker (*Psylla mali*) and apple scab (*Fusicladium dendriticum*) in the following manner:—

Before the buds open all apple trees must be sprayed with at least an 8 % solution of ' Obstbaumkarbolineum ' of a brand recognised by the competent authorities.

At least three days after this treatment the trees must be sprayed with a lime-copper mixture at 1-2 % or with an equivalent preparation recognised by the competent authorities.

In case of failure to comply with these regulations the police is authorised to carry out the necessary work at the defaulter's expense.

Germany (Mecklenburg-Schwerin) (1). — The Ordinance of 27 January 1932 for the control of woolly aphis of the apple (*Eriosoma lanigerum*) obliges owners and holders of apple orchards to undertake a thorough cleaning of them during the winter and to destroy at latest before 15 June of each year every colony of woolly aphis that is found. New colonies which appear later must be destroyed as soon as possible by treating affected parts by an effective method. Trees of which there is no hope of successful treatment must be cut down and their surface roots removed. It is forbidden to transport apple trees from orchards infested with woolly aphis.

The police are responsible for inspection of apple trees in collaboration with experts. If the persons concerned fail to fulfil these obligations the police are authorised to carry out the necessary work at the defaulter's expense.

(1) Communication from the Biologische Reichsanstalt für Land-und Forstwirtschaft, Berlin-Dahlem, official correspondent of the Institute.

Belgium. — A Ministerial Decree of 18 April 1932 provides as follows: —

Art. 1. — Importation into Belgium of tubers or plants of potatoes, of fruits or plants of tomatoes and of aubergines grown in or coming from France is forbidden.

Art. 2. — Importation of such products grown in or coming from countries other than France is allowed only if consignments are accompanied by a certificate issued by the Phytopathological Service of the importing country indicating the country of origin of the products and stating that they were grown in a region free from Colorado beetle [*Leptinotarsa decemlineata*].

In order to be considered as coming from such a region the products must have been cultivated and packed in a place situated more than twenty kilometres from any crop infested with the Colorado beetle.

Art. 3. — Importation of consignments coming by sea may be allowed only by the custom houses of Antwerp, Bruges, Brussels, Gand, Liège, Ostend and Zeebrugge, and those coming by land by a custom house situated on a railway or by one of the following:— Arendonck, Baerle-Duc, Bouchaute, Canne, Coewacht (Moerbeke), Esschen (Village), Houcke, Kessenich, Kieldrecht, Kruisstraat (Moerbeke), La Clinge (Village), La Planck (Fouron-Saint-Martin), Maeseyck, Meersel (Meerle), Middelbourg, Molen-Beersel, Mouland, Oudenburgsche Sluis (Wachtebeke), Overslag (Wachtebeke), Paal (Kemseke), Petit-Lanaye (Lanaye), Pont-de-Paille (Maldegem), Putte (Stabroek), Saint-Laurent, Sainte-Marguerite, Santvliet, Schapenbrug (Westcappelle), Smeermaes (Lanaeken), Strijbeek (Meerle), Vroenhoven, Watervliet and Wuestwezel.

Art. 4. — Consignments not accompanied by the certificate prescribed in Art. 2 will be returned unless inspection by the Belgian Special Phytopathological Service, carried out at the importer's expense, shows them to be free from the Colorado beetle.

Art. 5. — Any grower or holder of potatoes, tomatoes or aubergines who finds the Colorado beetle to be present is required immediately to inform the communal Burgomaster who will notify the Minister of Agriculture by telegram.

Art. 6. — Any infringement of the foregoing regulations will be punishable by the penalties provided in Art. 21 of the Royal Decree of 15 May 1929. (*Moniteur Belge*, Bruxelles, 22 avril 1932, 102e année, nº 113, p. 2235-2236).

Cyprus. — *The Cyprus Agricultural Journal*, Nicosia, 1932, Vol. XXVII, Part I gives on pages 5-16 an abstract of the legislation at present in force in Cyprus dealing with plant pests and diseases.

Hungary. — Ordinance No. 47000/1932 of 8 April 1932 contains regulations governing the commerce in insecticides. 'Special' and 'ordinary' preparations are distinguished. A list annexed to the Ordinance enumerates 32 common insecticides, their uses and required qualities. Commerce in these insecticides is allowed only under the designation 'ordinary' which they are termed in the list, and with indication of the uses and properties required in the said list.

Commerce in the special preparations is allowed only with authorisation from the Ministry of Agriculture.

The Ordinance contains regulations concerning the conditions of authorisation for sale, the constitution and functioning of the Plant Protection Bureau responsible for inspecting all home and foreign insecticidal products. This Bureau is also responsible for keeping an up-to-date list of all makers of and traders in such products.

A Plant Protection Council for giving advice concerning the value of the various preparations will be formed as from 1 August 1932 (*Földmívelési Értesítö*, Budapest, 1932., aprilis 25, XLII. évf., 8. sz., 71-75. o.).

*** In conformity with the Decrees and Laws relating thereto the Minister of Agriculture gives in Decree No. 48563/1932 IX.2 of 27 April 1932 a list of the countries where the following diseases have been observed: —

Chrysophlyctis endobiotica (= *Synchytrium endobioticum*): Germany, Poland, the Netherlands, Switzerland, Denmark, Czechoslovakia, Belgium, Austria, France, Great Britain, Finland, Norway and Sweden.

Leptinotarsa decemlineata: United States and France.

Phthorimaea operculella: Southern Europe, Algeria, Cape Colony, California, Australia, Azores, Tasmania and New Zealand.

Epithrix cucumeris: North America. (*Földmívelési Értesítö*, Budapest, 1932., május 10, XLII. évt., 9. sz., 90. o.).

*** The Decree of the Minister of Agriculture No. 48600/1932 of 2 May 1932 orders the obligatory destruction of cockchafers (*Melolontha melolontha*) in view of the expected serious invasion of these insects.

The chief local administrative officials will supervise the putting into effect of the prescribed measures, will apply them personally in the communal territories and where necessary will make use of school children. (*Földmívelési Értesítö*, Budapest, 1932., május 10, XLII. évf., 9. sz., 88.o).

Italy. — By Ministerial Decree of 7 March 1932 the Commune of Guardiaregia in the province of Campobasso has been declared infected with grape phylloxera. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 17 marzo 1932, anno 73°, n. 64, p. 1317).

*** By the Royal Decree-Law No. 369 of 19 March 1932 full and entire effect was given to the Tariff Agreement between Italy and Austria and to the two supplementary articles of the Italo-Austrian Commerce and Navigation Treaty of 28 April 1923, settled at Rome on 18 February 1932.

According to Art. 4 of the Tariff Agreement 'as regards the transit of animals and animal and plant products the provisions of the Special Agreements in force between the High Contracting Parties will continue to be applicable'.

'In the reciprocal traffic referred to in the present Agreement sanitary regulations, as far as possible uniform, will be applied to the disinfection of the goods

transported and the means of transport. The same will apply to the other preventive measures against infectious diseases of man, animals and plants ' (Art. 5).

According to the first supplementary article of the above-named Treaty the Austrian Republic foregoes among others the treaty dues fixed for the following item in the Italian tariff: 692 *h*) Copper sulphate.

It foregoes also taking advantage of the following item: ' ad 692 *h*) — Under this number enter preparations having a copper basis for control of plant diseases '.

The Kingdom of Italy foregoes among others the treaty dues fixed by the above-named Treaty for the following item on the Austrian tariff:—

ex 602 *a*) 503-*a*) 1 Copper sulphate and preparations having a copper basis for the control of plant diseases.

(*Gazzetta Ufficiale del Regno d'Italia*, Roma, 27 aprile 1932, anno 73°, n. 97, pp. 2000-2003).

*** By Ministerial Decree of 13 April 1932 the prices of public sale of the following tobacco bi-products have been reduced in varying degree: normal tobacco extract, superior tobacco extract, sulphate of nicotine. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 2 maggio 1932, anno 73°, n. 101, pp. 2079-2080).

Morocco (French Zone). — By Decree of the Director General of Agriculture, Commerce and Land Settlement dated 30 March 1932, to the list of vertebrates specified in Art. 1 of the Decree of 1 March 1930 determining the vertebrates for whose destruction the substances included in the Table *A* annexed to the Dahir of 2 December 1922 may be utilised, has been added the name ' sparrows '.

Art. 2 of the Decree of 1 March 1930 is completed in the following manner: —

' Poisoned bait intended for the destruction of sparrows may be used only in the conditions defined by Decree of the Chief of the district which will indicate in particular the periods during which it may be used and the places where it may be placed.

' The people must be notified of these periods and places seven clear days before the poisoned bait is set down and to this effect the necessary indications must be affixed or cried in the public places and markets of the tribes concerned.

' Bait intended for the destruction of sparrows must be placed in positions inaccessible to poultry. When placed on the ground it must be surrounded by a wire netting fence with a minimum height of 1 metre and with a mesh not exceeding 3 centimetres.

' At the close of the periods specified in the above-named conditions the bait must be removed and buried at a minimum depth of 0.5 m. ' (*Empire Chérifien. Protectorat de la République Française au Maroc. Bulletin Officiel*, Rabat, 8 avril 1932, XXI[ème] année, n° 1015, p. 392).

*** A Vizirial Decree of 18 April 1932 (11 hija 1350) contains regulations governing in the following manner control measures to be taken against fruit flies in the French zone of the Sheriffian Empire:—

Art. 1. — The provisions of the present Decree are applicable to all stages of: (1) the Mediterranean fruitfly (*Ceratitis capitata* Wied.), commonly known

as ' mouche des fruits ', ' mouche des oranges ', ' mouche des pêches ', etc.; (2) the species of the family *Trypetidae* which shall be specified by Decrees of the Director General of Agriculture, Commerce and Land Settlement.

Art. 2. — The plant species to which the following prescriptions are applicable will be fixed by Decree of the Director General of Agriculture, Commerce and Land Settlement.

Art. 3. — Within the meaning of the present Decree and of those which shall be promulgated for giving it effect, by the term ' fruit ' shall be understood the organ containing or bearing the seeds produced by any wild or cultivated plant and particularly by plants of the orchard and vegetable or ornamental garden.

Art. 4. — In order to prevent and where necessary check damage by the above-named flies to the plant species and fruits to which the present Decree refers, land owners, farmers, planters, share tenants, tenants, usufructuaries, agents, native groups, administrators of State and municipal estates, of public establishments and ' habous ' property, persons occupying or farming, under any kind of title, land, even that attached to dwelling houses or serving as gardens, on which are cultivated or found the plant species referred to in Art. 2, are required to carry out the measures that shall be prescribed by Decree of the Director General of Agriculture, Commerce and Land Settlement, and in particular to: (*a*) destroy fallen fruit; (*b*) gather fruit still on the tree and destroy or sterilise it; (*c*) apply poisons-bait sprays and use traps.

Decrees of the Director General of Agriculture, Commerce and Land Settlement will fix the cases and conditions in which these operations shall be carried out.

The foregoing regulations apply to the properties specified even when these are situated within the boundaries of towns and centres.

Art. 5. — Dealers, owners or managers of storehouses or packing sheds, owners or managers of factories utilising fruits and, in general, any person storing or holding fruits whether for his own or others' purposes, are required to carry out all the control or preventive measures ordered by Decree of the Director General of Agriculture, Commerce and Land Settlement, these including where necessary the destruction of fruit.

Art. 6. — Persons infringing the regulations of the present Decree and of those which shall be promulgated for giving it effect will be ordered by the officials of the local control authorities or by the chiefs of the municipal services to carry out the control or preventive measures within 48 hours of the day on which the summons is issued, in default of which the measures will be carried out officially at the defaulters' expense.

The whole without prejudice to the application where necessary of the penalties provided in Art. 31 of the Dahir of 20 September 1927 (23 rebia I 1345). (*Empire Chérifien. Protectorat de la République Française au Maroc. Bulletin Officiel,* Rabat, 1932, XXI[ème] année, n° 1018, p. 499-500).

*** A Decree of the Director of Waters and Forests, dated 14 April 1932, authorises owners or holders of land included within certain zones of the Circle of

Loukkos (Ouezzan) to destroy on their land, by any means excepting fire, rabbits which are damaging their crops.

Rabbits killed in these conditions may not be transported, hawked or sold in any place whatever.

The present Decree shall carry effect until 3 September 1932, the last day of the close season for 1932. (*Ibid.*, p. 505-506).

Switzerland (Canton of Vaud). — The Law concerning the growing of tree fruits, which was approved by the Grand Council of the Canton of Vaud on 22 March 1932 and came into force on 6 April following, rules *inter alia* that fruit trees must receive the care necessary to protect them from animal aud plant parasites (particularly from mistletoe [*Viscum album*] and woolly aphis [*Eriosoma lanigerum*]) the development of which might be a danger to neighbouring fruit trees.

On request of or on information from the Cantonal Commission for Fruit Trees the Council of State may make obligatory in certain regions of the country the control of one or more parasites of fruit trees. The communal authorities may decide to make obligatory within the territory of the commune the control of one or more parasites of fruit trees.

In cases when fruit trees are parasitised to the extent of becoming a centre of infection for neighbouring trees the Cantonal authorities may order the treatment or removal of trees at the owner's expense in accordance with the procedure fixed by the present Law.

Togoland (French). — By Ministerial Decree of 13 February 1932 the provisions of the Ministerial Decree of 27 February 1922 regulating control measures against the coffee berry borer (*Stephanoderes*) are made applicable to the products specified in Art. 1 of the said Ministerial Decree if presented for importation into or transit in French Togoland. (*Journal Officiel de la République Française*, Paris, 9 mars 1932, LXIV^{ème} année, n^{o} 58, p. 2529).

*** By Ministerial Decree of 13 February 1932 the provisions of the Ministerial Decree of 3 December 1929 (see this *Bulletin*, 1930, No. 6, pp. 90-91) concerning the protection of cacao plantations in the French Colonies are made applicable to plants, pods and seeds of cacao presented for importation into and transit in the territory of French Togoland. (*Ibid.*).

RECENT BIBLIOGRAPHY

ANDREWARTHA, H. G. The apple curculio. Its control by a poison bait. *Journal of the Department of Agriculture of Western Australia*, Perth, 1932, Second Series, Vol. 9, No. 1, pp. 104-105.

[*Othiorrhynchus cribricollis*].

APPEL, O. Kleeseiden und Flachsseide. *Deutsche Landwirtschaftliche Presse*, Berlin 1932, 59. Jahrg., Nr. 22, S. 270, 1 Taf.

[*Cuscuta racemosa, C. Trifolii, C. Epilinum*].

Badoux, H. Quelques données sur l'importance des dégâts causés par le chermès du sapin. *Journal Forestier Suisse*, Berne, 1932, 83ème année, nº 6, p. 144-146.
[*Dreyfusia nusslini, D. piceae*].

Balachowsky, A. Le pou de San-José et l'importation des fruits frais. *Revue des Agriculteurs de France*, Paris, 1932, 64ème année, nº 6, p. 146-148, 2 fig.
[*Aspidiotus perniciosus*].

Bawden, F. C. A study of the histological changes resulting from certain virus infections of the potato. *Proceedings of the Royal Society*, London, 1932, Series B., Vol. 111, No. B. 769, pp. 74-85, pls. 5-7. References, p. 84.
[« Acronecrosis » (« Top-necrosis »), « Acropetal necrosis » (« Leaf drop streak »), « Leaf roll » (« Phloem necrosis »)].

Biologische Reichsanstalt für Land- und Forstwirtschaft in Berlin-Dahlem. Bibliographie der Pflanzenschutzliteratur. Das Jahr 1931. Bearbeitet von Oberregierungsrat Prof. Dr. H. Morstatt. Berlin 1932, IV, 251 S.

Bodenheimer, F. S. Ueber die Ausrottung von *Opuntia* ssp. durch Dactylopius ssp. auf Grund eigener Beobachtungen auf Ceylon. *Zentralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten*, Zweite Abteilung, Jena 1932, 86. Bd., Nr. 5-7, S. 155-160, Abb. 1-3. Literatur, S. 160.

Bovey, P. L'anthonome du fraisier et du framboisier (*Anthonomus rubi* Herbst). *Revue Horticole Suisse*, Genève, 1932, Vème année, nº 6, p. 125-130, fig. 1-9.

Brown, Harold D. The sugar beet nematode, *Heterodera schachtii*, a new parasit in Canada. *Scientific Agriculture*, Ottawa, Canada, 1932, Vol. XII, No. 9, pp. 544-552, figs. 1-6. Literature cited, p. 552.

Bryan, H. The maintenance of healthy stocks of potatoes in England. *The Journal of Agricultural Science*, London, 1932, Vol. XXII, Pt. 2, pp. 358-365.

Candura, G. S. Osservazioni biologiche sulla *Tephroclystia pumilata* Hb., lepidottero geometride che fa seccare i boccioli di rose. *Bollettino della Società di Naturalisti in Napoli*, Napoli, 1932, vol. XLIII (1931), pp. 353-359. Bibliografia, pp. 358-359.

Candura, G. S. Ricerche sulla vita degli insetti e sui danni da essi causati ai prodotti dell'economia rurale o delle industrie agrarie. 2º contributo. Gl'insetti della camomilla secca e di altre erbe medicinali e industriali disseccate. *Bollettino della Società dei Naturalisti in Napoli*, Napoli, 1932, vol. XLIII (1931), pp. 343-352, figg. 1-2.
[*Ptychopoda herbariata, Ephestia elutella, Sitodrepa panicea*].

Chabrolin, Ch. Les mauvaises herbes des cultures de céréales. Comment éviter leur développement. *La Tunisie Agricole*, Tunis, 1932, 33e année, nouv. sér., nº 2, p. 1-17, figs. 1-5.

Chiappelli, R. Studio sui giavoni e i metodi di lotta. *Il Giornale di Risicoltura*, Vercelli, 1932, anno XXII, n. 5, pp. 65-76, figg. 1-4.
[*Panicum* spp.].

Clayton, E. E. Desinfección de la semilla de hortalizas. *La Hacienda*, New York, 1932, año 27º, núm. 6, págs. 222 y 223, 3 figs.

Compère, Harold, and Smith, Harry S. The control of the citrophilus mealybug, Pseudococcus gahani, by Australian parasites. *Hilgardia*, Berkeley, California, 1932, Vol. 6, No. 17, pp. 585-618, figs. 1-7. Literature cited, p. 618.

Cormier, P. Le Septoria graminum, champignon parasite du blé. *Comptes rendus hebdomadaires des séances de l'Académie d'Agriculture de France*, Paris, 1932, tome XVIII, nº 20, p. 671-672.

Costantin, J. Pathologie végétale. Précocité, productivité et résistance à la dégénérescence. *Comptes rendus hebdomadaires des séances de l'Académie d'Agriculture de France*, Paris, 1932, tome XVIII, nº 19, p. 661-665.

Criddle, Norman. The life-history of Schistocerca lineata Scudd. *The Canadian Entomologist*, Orillia, 1932, Vol. LXIV, No. 5, pp. 98-102, figs. 1-3.

Cunningham, G. H. Orchard sprays in New Zealand. I. The sulphur series. *The New Zealand Journal of Agriculture*, Wellington, 1932, Vol. 44, No. 3, pp. 177-186, figs. 1-4. Literature cited, pp. 185-186.

Cunningham, G. H. Orchard sprays in New Zealand. II. The lime-suphur series. *The New Zealand Journal of Agriculture*, Wellington, 1932, Vol. 44, No. 4, pp. 263-269. Literature cited, p. 269.

Davidson, James. Resistance of the eggs of Collembola to drought conditions. *Nature*, London, 1932, Vol. 129, No. 3267, p. 867, fig. 1.
[*Sminthurus viridis*].

Edwards, E. T. Stem nematode disease of lucerne. With review of literature concerning the causal organism *Tylenchus dipsaci* (Kühn) Bast. *The Agricultural Gazette of New South Wales*, Sydney, 1932, Vol. XLIII, Pt. 4, pp. 305-314, figs. 1-5; Pt. 5, pp. 345-356. Literature cited, pp. 354-356.

Fajardo, T. G., and Marañon, Joaquin. The mosaic disease of sincamas, Pachyrrhizus erosus (Linnaeus) Urban. *The Philippine Journal of Science*, Manila, P. I., 1932, Vol 48, No. 2, pp. 129-142, pls. 1-6. Bibliography, p. 140.

Fiori, A. Inchiesta sui danni prodotti alle piante coltivate e spontanee dalle eccezionali basse temperature dell'inverno 1928-29. *Annali del R. Istituto Superiore Agrario e Forestale*, Firenze, 1932, ser. seconda, vol. III (anni 1928-1931), pp. 103-158, 1 cartina. Bibliografia, pp. 158.
[In various parts of Italy].

Frost, Kenneth R. Invención de una máquina para extirpar químicamente las hierbas infestantes. *La Hacienda*, New York, 1932, año 27, núm. 6, pág. 227, 1 fig.

Fuller, Harry J. The injurious effects of ultra-violet and infra-red radiations on plants. *Annals of the Missouri Botanical Garden*, Lancaster, Pa., 1932, Vol. XIX, No. 1, pp. 79-86, pl. 3.

Garbowski, L., i Leszczenko, P. Sprawdzanie odpornosci ziemniaków na raka ziemniaczanego, *Synchytrium endobioticum* (Schilb.) Perc. Sprawozdanie II. Essais de résistance des pommes de terre contre la galle verruqueuse, *Synchytrium endobioticum* (Schilb.) Perc. Rapport II. *Prace Wydzialu Chorób Roslin, Panstwowego Instytutu Naukowego Gospodarstwa Wiejskiego w Bydgoszczy*, Bydgoszcz, 1932, Nº 11, str. 51-76.
[In Polish, with title and summary in French].

GARBOWSKI, L. Spostrzezenia nad chorobami roslin uprawnych w Wielkopolsce i na Pomorzu w okresie 1928-1931 r. Observations sur les maladies des plantes cultivées dans l'ouest de la Pologne pendant la période 1928-1931. *Prace Wydzialu Chorób Roslin, Panstwowego Instytutu Naukowego Gospodarstwa Wiejskiego w Bydgoszczy*, Bydgoszcz 1932, No. 11, str. 3-50, ryc. 1-4.

[In Polish, with title and summary in French. Specially noteworthy are *Cytospora Calvillae* n. sp., on apples of the var. Adersleber Calvill and *Fusoma Persicae* n. sp. on peach tree branches. Latin diagnoses are given of the two new species].

GARDNER, C. A. A new noxious weed. The Devil's claw. *Martynia* (*Proboscidea*) *Louisiana*, Mill. *Journal of the Department of Agriculture of Western Australia*, Perth, 1932, Second Series, Vol. 1, No. 1, pp. 129-131, 1 pl.

GEACH, W. L. Foot and root rots of wheat in Australia. *Fusarium culmorum* (W. G. Sm.) Sacc. as a causal organism. *Journal of the Council for Scientific and Industrial Research*, Melbourne, 1932, Vol. 5, No. 2, pp. 123-128. Literature cited, p. 128.

GHIMPU, V. Bolile cu virus ale tutunului. *Buletinul cultivarei si fermentarei Tutunului*, Bucuresti, 1932, anul XXI, nr. 2, pag. 163-214, plansa I-XI. Bibliografie, pag. 207-212.

[In Rumanian, with title and summary in French. Virus diseases of tobacco].

GIBBS, J. G. Weed host plants of club-root in New Zealand. *The New Zealand Journal of Agriculture*, Wellington, 1932, Vol. 44, No. 4, pp. 275-276. Bibliography, pp. 275-276.

[*Plasmodiophora Brassicae*].

HEIM, ROGER, et VAYSSIÈRE, PAUL. La Commission d'Études des Ennemis des Arbres, des Bois abattus et des Bois mis en œuvre. Ses buts et ses travaux. *Bulletin de la Société d'Encouragement pour l'Industrie Nationale*, Paris, 1932, 131e année, nº 5, p. 335-343.

HEMMI, TAKEWO. Studies on some wood-destroying fungi attacking conifers in Japan. *Memoirs of the College of Agriculture, Kyoto Imperial University, No. 20* (*Phytopathological Series No. 5*), Kyoto, Japan, 1932, 29 pp., 7 figs., 5 pls. Literature cited, pp. 27-29.

[*Fomes ulmarius, F. Laricis, F. pinicola, Polyporus orientalis, P. Schweinitzii, P. sulphureus, Trametes Pini*].

HILLI, A. Kyntösyvyyden vaikutuksesta peltomaan rikkarnohoisuuteen. On the influence of the depth of plowing upon the quality and amount of weeds. *Maatalousteellinen Aikakauskirja*, Helsinki, 1932, 4. wuosik, 2. vihko, s. 60-70.

[In Finnish, with title and summary in English].

KANNENBERG, HEINRICH. Unkraut- und Schädlingsbekämpfung auf Niederungsmoor. Erfahrungen der letzten fünf Jahre in der Moorversuchswirtschaft Neu-Hammerstein. *Deutschen Landwirtschaftliche Presse*, Berlin 1932, 59. Jahrg., Nr. 22, S. 269.

KÉLER, S. Przyczynek do znajomosci pasorzytów muchy szwedzkiej. A contribution toward the knowledge of the parasites of *Oscinis frit* L. *Prace Wydzialu Chorób Roslin, Panstwowego Instytutu Naukowego Gospodarstwa Wiejskiego w Bydgoszczy*, Bydgoszcz 1932, Nº 11, str. 87-89.

[In Polish, with title and summary in English].

Langenbuch, R. Sublimat, ein erfolgreiches und wirtschaftliches Bekämpfungsmittel gegen die Kohlfliege im Grossanbau. *Deutsche Landwirtschaftliche Presse*, Berlin 1932, 59. Jahrg., Nr. 17, S. 209-210, Abb. 221.
[*Phorbia brassicae*].

Lepik, E. Talioraste hävimisest möödunud 1931. a kevadel. (Die Vernichtung der Roggensaat in Eesti im Frühjahr 1931). *Agronoomia*, Tartu, 1932, XII aastakäik, nr. 5, lk. 149-155, 180, 1 kaart.
[In Estonian, with title and summary in German. *Calonectria graminicola*].

Lequertier, Roger. Le doryphore de la pomme de terre. II. *Revue Générale d'Horticulture*, Paris, 1932, 10e année, nº 106, p. 33-36, 3 fig.
[*Leptinotarsa decemlineata*].

Leszczenko, P. Doswiadczenia z nowemi srodkami do zaprawiania nasion zbóz przeciw grzybkom glowniowym. Essais de nouveaux remèdes pour le traitement des semences des céréales contre les Ustilaginées. *Prace Wydzialu Chorób Roslin, Panstwowego Instytutu Nankowego Gospodarstwa Wiejskiego w Bydgoszczy*, Bydgoszcz 1932, Nº 11, str. 77-86, ryc. 1.
[In Polish, with title and summary in French].

Levy, E. Bruce, and Madden, E. A. Hard-fern control by spraying with arsenic pentoxide. Experimental work in connection with regrassing secondary- growth country at Whangamomona. *The New Zealand Journal of Agriculture*, Wellington, 1932, Vol. 44, No. 3, pp. 186-193, figs. 1-6.
[*Paesia scaberula*].

Mains, E. B., and Martini, Mary L. Susceptibility of barley to leaf rust (Puccinia anomala) and to powdery mildew (Erysiphe graminis hordei). *United States Department of Agriculture. Technical Bulletin No. 295*, Washington, D. C., 1932, 34 pp.

Malenotti, Ettore. Contro la « cassida » della barbabietola. *Giornale di Agricoltura della Domenica*, Piacenza, 1932, anno XLII, n. 14, p. 173.
[*Cassida nobilis*].

Marx, Th., und Merkenschlager, F. Zur Biologie der Kartoffel. XII. Mitteilung. Beobachtungen und Untersuchungen über den Verlauf des Kartoffelabbaues. *Arbeiten aus der Biologischen Reichsanstalt für Land- und Forstwirtschaft, Berlin-Dahlem*, Berlin 1932, XIX. Bd., Heft 5 (Schlussheft), S. 413-492, Abb. 1-22. Nachweise zu Mitteilung XII, S. 491-492.

Mathur, R. N. Leaf-curl of cotton in garden zinnias in North India. *Nature*, London, 1932, Vol. 129, No. 3265, p. 797.

Meyer, André. Sur l'emploi des colorants et de diverses substances organiques dans la lutte contre les maladies cryptogamiques, en particulier le mildiou de la vigne. *Revue de Viticulture*, Paris, 1932, 39e année, tome LXXVI, nº 1970, p. 197-202.
[*Plasmopara viticola*].

Miestinger, K. Versuche zur Bekämpfung der Zwetschenschildlaus (Eulecanium corni Bché.) mit Schwefelpräparaten. *Die Gutenbauwissenschaft*, Berlin 1932, 6. Bd., 5. Heft, S. 554-559. Literatur, S. 558-559.

Monte, Oscar. Uma broca do kaki, *Neoclytus pusillus*, Cast. et Gory. *Chacaras e Quintaes*, S. Paulo, 1932, vol. XLV, n. 5, pags. 579-580, 1 fig.

MOREAU, L., et VINET, E. Peut-on prévoir l'importance des invasions de cochylis et d'eudémis. *Revue des Agriculteurs de France*, Paris, 1932, 64e année, nº 6, p. 149-150, 1 diagr.

[*Conchylis ambiguella* and *Polychrosis botrana*].

MURILLO, LUIS MARIA. Los gusanos o larvas de las cerezas del café. *Revista Cafetera de Colombia*. Bogotá-Colombia, 1931, vol. III, núm. 30, págs. 1126 a 1129, figs. 1-2.

[*Anastrepha fratercula* in coffee berries; *A. ludens* (?) and *A. striata* (?) in oranges mangoes, etc.].

MURPHY, PAUL A., and MCKAY, ROBERT. Further observations and experiments on the origin and control of onion mildew. *Journal of the Department of Agriculture*, Dublin, 1932, Vol. XXXI, No. 1, pp. 60-76, figs. 1-5.

[*Peronospora Schleideni*].

NISIKAWA, YASABURO. Chemical properties of solutions prepared from the sodium fluosilicate-hydrated lime mixtures with special reference to their toxicity to plants. *Memoirs of the College of Agriculture, Kyoto Imperial University, No. 21 (Entomological Series No. 4)*, Kyoto, Japan, 1932, 15 pp., 4 figs. Literature cited, pp. 14-15.

OROS, IOAN. Desinfectarea semintei de tutun cu apa calda. *Buletinul cultivarei si fermentarei Tutunului*, Bucuresti-Baneasa, 1932, anul XXI, nr. 2, pag. 258-264. Bibliografie, pag. 263.

[In Rumanian, with title and summary in French. Disinfection of tobacco seed with hot water].

PALO, MACARIO A. Anthracnose and important insect pests of the mango in the Philippines, with a report on blossom-spraying experiments. *The Philippine Journal of Science*, Manila, 1932, Vol. 48, No. 2, pp. 209-235, pls. 1-8. Literature cited, p. 231.

[*Glomerella cingulata, Idiocerus niveosparsus, I. clypealis, Chlumetia transversa*, etc.].

PITTMAN, H. A. Bacterial blight of beans. Disease-free seed and disease-free soil essential for control. *Journal of the Department of Agriculture of Western Australia*, Perth, 1932, Second Series, Vol. 9, No. 6, pp. 144-148, figs. 1-2.

[*Phytomonas Medicaginis* var. *phaseolicola*].

PITTMAN, H. A. Downy mildew (so-called « blue mould ») of tobacco. Found occurring naturally on wild tobacco (*Nicotiana suaveolens*) in the wheat belt. Precautions necessary during the forthcoming season. *Journal of the Department of Agriculture of Western Australia*, Perth, 1932, Second Series, Vol. 9, No. 1, pp. 97-103, figs. 1-3.

[*Peronospora* sp.].

PITTMAN, H. A. Take-all and similar diseases of wheat and how to control them. *Journal of the Department of Agriculture of Western Australia*, Perth, 1932, Second Series, Vol. 9, No. 1, pp. 131-140, figs. 1-4.

[*Ophiobolus graminis, Wojnowicia graminis, Helminthosporium sativum*].

PRETI, GIACOMO. Sulla presenza del « Pythium de Baryanum Hesse » nelle piante di « Cereus ». *Rivista di Patologia Vegetale*, Pavia, 1932, anno XXII, n. 5-6, pp. 121-132, figg. 1-5. Bibliografia, pp. 131-132.

RAMSAY, GLEN B., and LINK, GEORGE K. K. Market diseases of fruits and vegetables: tomatoes, peppers, eggplants. *United States Department of Agriculture, Miscellaneous Publication No. 121*, Washington, D. C., 1932, 44 pp., 11 pls. Literature cited, pp. 39-44.

[*Alternaria Solani, Alternaria* spp., *Colletotrichum phomoides, Aplanobacter michiganense, Bacillus Aroideae, Bacterium vesicatorium, Basisporium gallarum*, blossom-

end rot, *Phytophthora terrestria*, *Bacterium* sp., cloudy spot, freezing and chilling injury, *Fusarium* spp., *F. Lycopersici*, *Botrytis* sp., *Cladosporium*, growth cracks, *Isaria clonostachoides*, *Phyt. intestans*, *Melanconium* sp., mosaic (mottling), *Macrosporium Tomato*, *Phoma destructiva*, puffiness, *Rhizopus* sp., *Sclerotium Rolfsii*, *Septoria Lycopersici*, *Rhizoctonia Solani*, streak, sulphur dioxide injury, sun scald, *Oospora lactis parasitica*, yellows, on potatoes; *Alternaria* sp., *Colletotrichum nigrum*, blossom-end rot, *Cercospora Capsici*, freezing injury, *Botrytis* sp., *Phytophthora Capsici*, *Pythium De Baryanum*, *Vermicularia Capsici*, *Sclerotium bataticola*, on chillies; *Colletotrichum* sp., *Pythium aphanidermatum*, *Phomopsis vexans*, *Phytophthora terrestria*, on eggplants].

Robertson, H. T. Maturation of foot and root tissue in wheat plants in relation to penetration by *Ophiobolus graminis* Sacc. *Scientific Agriculture*, Ottawa, Canada, 1932, Vol. XII, No. 10, pp. 575-592, fig. 1, pls. I-V. References, pp. 591-592.
[In English, with title and summary also in French (p. 626)].

Rossi, Vincenzo. Contributo allo studio della Patologia vegetale in Somalia. *L'Agricoltura Coloniale*, Firenze, 1931, anno XXV, n. 11, pp. 522-528.
List of the diseases observed in Italian Somaliland and studied at Royal Station of Plant Pathology, Rome on *Ceiba pentandra*, *Dolichos*, *Arachis hypogaea*, *Gossypium herbaceum*, *Nicotiana Tabacum*, *Ricinus communis* var. *microcarpus*, *Manihot utilissima*, *Morus alba*].

Rui, Dino Bernardo. Lotta invernale contro la tignola del melo (Hyponomeuta malinellus). *Note di Frutticoltura*, Pistoia, 1932, anno X, n. 6, pp. 96-105, figg. 16-18.

Salaman, Redcliffe N., and Bawden, F. C. An analysis of some necrotic virus diseases of the potato. *Proceedings of the Royal Society*, London, 1932, Series B, Vol. 111, No. B. 769, pp. 53-73, pls. 3-4. References, p. 73.
[« Streak » (« Stipple-streak » or « Leaf-drop streak » or « Acropetal necrosis », « Top-necrosis », « Top-necrosis X », « Top-necrosis A », « Top-necrosis B », « Top-necrosis C »)].

Scheuermann, W. Ist der Maulwurf nützlich oder schädlich? *Mitteilungen der Deutschen Landwirtschafts-Gesellschaft*, Berlin 1932, 47. Jahrg., Stück 9, S. 157.
[*Talpa europaea*].

Schüpfer, Vincenz. Grundriss der Forstwissenschaft für Waldbesitzer und Forstmänner sowie für Studierende zur Einführung. 3. Auflage. Stuttgart, Verlagsbuchhandlung von Eugen Ulmer, 1932, IV, 367 S., 82 Abb.
[The contents include:— B. Fortschutz (S. 148-213, Abb. 23-53)].

Seeger, M. Die Bekämpfung des Engerlings in Pflanzschulen mittels Acetylen. *Forstarchiv*, Hannover 1932, 8. Jahrg., Heft 6, S. 114-116.
[*Melolontha*].

Seto, Fusataro. Experimentelle Untersuchungen über die hemmende und die beschleunigende Wirkung des Erregers der sogenannten « *Bakanae* » – Krankheit, *Lisea Fujikuroi* Sawada, auf das Wachstum der Reiskeimlinge. *Memoirs of the College of Agriculture, Kyoto Imperial University, No. 18* (*Phytopathological Series No. 4*), Kyoto, Japan, 1932, 23 S., 1 Taf. Literaturverzeichnis, S. 21-22.

Sharples, A. Diseases of rubber. *The Malayan Agricultural Journal*, Kuala Lumpur, 1932, Vol. XX, No. 5, pp. 223-229.
[*Ganoderma pseudoferreum*, *Fomes lignosus*, *Sphaeronema fimbriatum*, *Oidium Heveae*].

SHITIKOVA-RUSSAKOVA, A. A. Peculiarities of the dissemination of spores in the air, especially of cereal rust spores. *Bulletin of Plant Protection*, Leningrad, 1932, Vol. V, No. 1, pp. 131-140, figs. 1-2. [Literature cited], p. 140.
[In Russian, with title and summary in English].

SHITIKOVA-RUSSAKOVA, A. A. The influence of the transplantation of winter-sown rye and wheat on rust development. *Bulletin of Plant Protection*, Leningrad, 1932, Vol. V, No., 1, pp. 85-96. [Literature cited], p. 96.
[In Russian, with title and summary in English].

SITOWSKI, LUDWIK. Strzygonia choinówka (Panolis flammea Schiff.) i jei pasorzyty na ziemiach polskich. Czesc III. Strzygonia choinówka (Panolis flammea Schiff.) und ihre Parasiten in Polen. III. Teil. *Roczniki Nauk Rolniczych i Lesnych*, Poznan 1932, tom XXVII, zeszyt 2, str. 167-178.
[In Polish, with title and summary in German].

SKALOV, G. G. On the biology of Euxoa obesa B. (var. scytha Alph.). (Preliminary report). *State Institute for Tobacco Investigations, Bull. 79*, Jalta, 1931, 12 pp., 8 figs., 1 diagr.
[In Russian, with title and summary in English].

SKALOV, G. G. The biological cycle of tobacco beetle (Lasioderma serricorne F.) in the conditions of fermentatives factories and the influence of temperature variations on the activity of the insect. *State Institute for Tobacco Investigations, Bull. 80*, Jalta, 1931, 16 pp., 2 diagrs.
[In Russian, with title and summary in English].

SNYDER, W. C. Seed dissemination in Fusarium wilt of pea. *Phytopathology*, Lancaster, Pa., 1932, Vol. 22, No. 3, pp. 253-257.
[*Fusarium orthoceras* var. *Pisi*].

SONDAK, I. Preparing entomologists and phytopathologists and experimental works in plant protection. *Bulletin of the Institute for Controlling Pests and Diseases*, Leningrad, 1931, No. 1, pp. 3-7.
[In Russian, with title also in English].

SORAUER, PAUL. Handbuch der Pflanzenkrankheiten. III. Bd.: Die pflanzlichen Parasiten. II. Teil. Fünfte, neubearbeitete Auflage. Unter Mitwirkung von Dr. E. KÖHLER, Dr. R. LAUBERT, Dr. E. MÜNCH, Dr. H. PAPE, Dr. H. RICHTER, Dr. H. W. WOLLENWEBER, Dr. H. ZILLIG herausgegeben von Dr. O. APPEL. Berlin, Verlagsbuchhandlung Paul Parey, 1932, VIII, 948 S., 195 Abb.

SPANGENBERG, JORGE. Observaciones sobre la modalidad e intensidad de ataque de la Puccinia glumarum en los cultivos trigueros del país. *Ministerio de Industrias. Dirección de Agronomía. Publicación Mensual*, Montevideo, 1932, año IV, n.º 8, págs. 147 a 152, 3 figs., 1 lám.

SPEYER, W. Hat *Cheimatobia brumata* L. einen Hochzeitsflug? *Anzeiger für Schädlingskunde*, Berlin 1932, VIII. Jahrg., Heft. 4, S. 37-38.

SPRENGEL, L. Biologische und epidemiologische Untersuchungen als Grundlage für die Bekämpfung der Kirschfruchtfliege, Rhagoletis cerasi L. *Die Gutenbauwissenschaft*, Berlin 1932, 6. Bd., 5. Heft, S. 541-553, Abb. 1-5.

TAKAHASHI, RYOICHI. Additions to the aphid fauna of Formosa (Hemiptera). *The Philippine Journal of Science*, Manila, 1932, Vol. 48, No. 1, pp. 69-75, figs. 1-2.

[*Myzus circumflexus*; *Lachnus nigripes* n. sp. on *Quercus glauca*; *Ceratovacuna arundinariae* n. sp. on *Arundinaria* sp.; *Trichoregma nipae*; *Thoracaphis setigerus* n. sp. on *Q. glauca*; *T. kashifoliae*; *Forda follicularia*. Description in English of the new species].

TAKAHASHI, RYOICHI. Records and descriptions of the Coccidae from Formosa. Part 2. *Journal of the Society of Tropical Agriculture*, Taiwan (Formosa), Japan, 1932, Vol. IV, No. 1, pp. 41-48, figs. 1-3.

[*Pseudococcus boninsis* on *Saccharum officinarum*, *Trionymus taiwanus* n. sp. on *Oryza sativa*, *Phenacoccus asteri* n. sp. on *Aster lauruleanus*, *Coccus takanoi* n. sp. on *S. officinarum*, *Mixaspis* n. g., *Formosaspis* n. gen., *Lepidosaphes* n. sp. on *Quercus glauca*. Descriptions in English].

TATTERSFIELD, F. The loss of toxicity of pyrethrum dusts on exposure to air and light. *The Journal of Agricultural Science*, London, 1932, Vol. XXII, Pt. 2, pp. 396-417. References, p. 417.

TERRANOVA, CARMELO. Per il marciume radicale degli agrumi. *Il Coltivatore Siciliano*, Catania, 1932, anno XI, n. 5, pp. 133-136.

[Disease of fungal origin. The causal agent is not yet known].

THIEM, H. Der gefurchte Dickmaulrüssler (Otiorrhynchus sulcatus F.) als Gewächshaus- und Freilandschädling (Zuchtergebnisse über Parthenogenese, Eiablage und Lebensdauer). *Die Gartenbauwissenschaft*, Berlin 1932, 6. Bd., 5. Heft, S. 519-540, Abb. 1a-1b.

THIEM, H. Ein auswechselbares biologisches Bodensieb. *Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin 1932, 12. Jahrg., Nr. 5, S. 33-34, Abb. 1-2.

THIEM, H. Heckenkirschen und Sauerdorn als Wirtspflanzen der Kirschfruchtfliege (*Rhagoletis cerasi* L.). *Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin 1932, 12. Jahrg., Nr. 6, S. 41-43.

[*Lonicera tatarica* and *Berberis vulgaris*].

THOMAS, P. H., and RAPHAEL, T. D. Internal cork in apples associated with malformed wood growths. *The Tasmanian Journal of Agriculture*, Tasmania, 1932, Vol. III, No. 2, pp. 69-73, figs. I-IV.

TOMSON, R. Puhtimise mõju tugevasti infitseeritud külvise idanevusele. (Beizungseinfluss auf die Keimung eines stark infizierten Saatguts). *Agronoomia*, Tartu, 1932, XII aastakäik, nr. 5, lk. 157-158, 180.

[In Estonian, with title and summary in German. *Calonectria graminicola*, *Leptosphaeria herpotrichoides*].

TRAVERSO, G. B. Direttive e problemi attuali della Patologia vegetale. *Atti della Società Italiana per il Progresso delle Scienze. Ventesima Riunione (Milano, 12-18 settembre 1931-IX)*. Roma, Società Italiana per il Progresso delle Scienze, 1932-X, vol. I, parte seconda: Rapporti di classe *B* e *C* — Relazioni, pp. 154-171.

TROCHAIN, J. Les théories modernes sur le rôle du potassium dans le développement du cancer chez l'homme et chez les végétaux. *Revue de Botanique Appliquée et d'Agriculture Tropicale*, Paris, 1932, 12e année, Bulletin nº 128, p. 308-311.

TROUVELOT, BERNARD. Traitements antidoryphoriques des pommes de terre. *Journal d'Agriculture Pratique*, Paris, 1932, 96e année, nº 13, p. 253-256, fig. 1-4; nº 14, p. 273-276, fig. 6 [5]-8; nº 15, p. 294-296, fig. 9-11.

[*Leptinotarsa decemlineata*].

VAN POETEREN, N. Bestrijding van de nacisvliegen. *Tijdschrift over Plantenziekten*, Wageningen 1932, 38e jaarg., 5e en 6e aflev., blz. 73-77.

[*Merodon equestris*, *Eumerus tuberculatus*].

VANTERPOOL, T. C., and TRUSCOTT, J. H. L. Studies on browning root rot of cereals. II. Some parasitic species of Pythium and their relation to the disease. *Canadian Journal of Research*, Ottawa, Canada, 1932, Vol. 6, No. 1, pp. 68-93, figs. 1-8, pls. I-II. References, pp. 92-93.

[*Pythium arrhenomanes* Drech. var. *canadensis* n. var. and *P. volutum* n. sp. Description in English].

VENKATARAYAN, S. V. Phytophthora arecae, parasitic on Areca tops, and a strain of P. palmivora Butl. (P. Faberi Maubl.) on a new host, Aleurites fordi. *Phytopathology*, Lancaster, Pa., 1932, Vol. 22, No. 3, pp. 217-227, figs. 1-4. Literature cited, pp. 226-227.

VIALA, P. Un parasite du mildiou de la vigne. *Comptes rendus hebdomadaires des séances de l'Academie d'Agriculture de France*, Paris, 1932, tome XVIII, nº 19, p. 654-656.

[*Trichothecium Plasmoparae*].

VIALA, P., et MARSAIS, P. Sur un parasite du mildiou de la vigne. *Comptes rendus hebdomadaires des séances de l'Académie des Sciences*, Paris, 1932, tome 194, nº 22, p. 1875-1877.

[*Trichothecium Plasmoparae*, observed in France, in 1915, 1928 and 1930, is a true parasite of *Plasmopara viticola*. Description in French].

WAHLEN, F. T. Bericht über die Tatigkeit der Eidg. landwirtschaftlichen Versuchsanstalt Oerlikon für das Jahr 1930. *Landwirtschaftliches Jahrbuch der Schweiz*, Bern 1932, XLVI. Jahrg., 1932, Heft 1, S. 59-136, 2 Abb.

[The contents include:— IV. Pflanzenschutz (1. Januar 1929 bis 31. Dezember 1930). Berichterstatter: Dr. E. NEUWEILER (S. 128-135)].

WARDLAW, C. W., and MCGUIRE, L. P. Pitting disease of bananas. Its nature and control. *Tropical Agriculture*, Trinidad, B. W. I., 1932, Vol. IX, No. 6, pp. 193-195.

[*Piricularia grisea* in Brazil].

WERNECK, H. L. Der Bakterienbrand der Sojabohne. *Wiener Landwirtschaftliche Zeitung*, Wien 1932, 82. Jahrg., Nr. 20, S. 155.

[*Bacterium glycineum* in Upper Austria].

WILLE, JOHANNES. Der Zuckerrohrbohrer, *Diatraea saccharalis* Fabr., ein bisher unbekannter Schädling am Weizen in den Küstengebieten Perus. *Anzeiger für Schädlingskunde*, Berlin 1932, VIII. Jahrg., Heft 3, S. 25-29, Abb. 1-2.

WILLIAMS, FRANCIS X. Handbook of the insects and other invertebrates of Hawaiian sugar cane fields. (Experiment Station of the Hawaiian Sugar Planters' Association). Honolulu, Hawaii, Advertiser Publishing Company, 1931, 400 pp., 180 figs., 41 pls. Bibliography, pp. 378-389.

[The following have collaborated in the preparation of the present volume: F. A. G. MUIR (Introduction); R. H. VAN ZWALUWENBURG (The soil fauna of sugar-cane fields. The nematodes attacking cane roots in Hawaii. Index); O. H. SWEZEY (Records of introduction of beneficial insects into the Hawaiian Islands)].

ZACHAROV, P. From the experiment of aeroplane dusting in the control of Bupalus piniarius L. in the forests of the Central Russia region and Ukraine in 1930. *Bulletin of the Institute for Controlling Pests and Diseases*, Leningrad, 1931, No. 1, pp. 121-126, 1 fig.
[In Russian, with title also in English].

ZAUMEYER, W. J. Comparative pathological hystology of three bacterial diseases of bean. *Journal of Agricultural Research*, Washington, D. C., 1932, Vol. 44, No. 8, pp. 605-632, figs. 1-16. Literature cited, p. 632.
[*Bacterium Phaseoli, Bact. Medicaginis* var. *phaseolicola, Bact. flaccumfaciens*].

ZEMAN, VÍCTOR. Una enfermedad nueva en los naranjales de Corrientes. *Physis*, Buenos Aires, 1931, tomo X, nº 37, págs. 410 a 411.
[*Aphelenchus citri* n. sp. on *Citrus*. Description of the new species in Spanish].

ZORIN, P. Guelder rose leaf-beetle (Galerucella viburni Payk). *Bulletin of the Institute for Controlling Pests and Diseases*, Leningrad, 1931, No. 1, pp. 55-79, figs. 1-21.
[In Russian, with title also in English].

NOTES

Sixth International Botanical Congress. — This Congress will be held at Amsterdam from 9 to 14 September 1935. An Executive Committee has been formed, President of which is Dr. F. A. F. C. Went, Professor of General Botany and Director of the Botanic Garden, University of Utrecht.

Twelfth International Zoological Congress. — The XIIth Congress is to be held at Lisbon during 1935 under the chairmanship of Dr. Arthur Ricardo Jorge, Professor of the University of Lisbon and Director of the Bocage Museum.

Prof. ALESSANDRO BRIZI, *Segretario generale dell'Istituto, Direttore responsabile.*